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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

PHILLIPS, FORREST M

ART UNIT

PAPER NUMBER

2837

MAIL DATE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/574,389	Applicant(s) MIRLACH ET AL.	
	Examiner FORREST M. PHILLIPS	Art Unit 2837	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 March 2008 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/26/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

The subject matter of this application admits of illustration by a drawing to facilitate understanding of the invention. Applicant is required to furnish a drawing under 37 CFR 1.81(c). No new matter may be introduced in the required drawing. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d).

Application has been examined in light of figures present in WO priority document.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the slightly larger outlet of the second muffler must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for

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consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1.Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by DE19743446 (to BMW hereinafter referred to as '446).

With respect to claim 1 '446 discloses an exhaust system for an internal combustion engine (see figure 1) comprising:

A first exhaust train (associated with element 6 in figure 1) including a flow permeable first muffler (3) in particular a rear muffler and

At least one second exhaust train (associated with element 5) parallel to the first exhaust train and including a flow permeable second muffler (2) in particular a rear muffler, wherein the first muffler and the second muffler have a mutually deviating structure; and wherein the first and second exhaust trains are guided over the whole

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length substantially without a cross-position, the first muffler comprises an inlet pipe (6) and an outlet pipe (13) with the outlet pipe having a small length and the second muffler (2) comprises an inlet pipe (5) and an outlet pipe (11) with the outlet pipe having a large length.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over DE19743446.

With respect to claim 2 '446 discloses the invention as claimed except explicitly wherein the outlet pipe of the second muffler has at least approximately twice the length of the outlet pipe of the first muffler, however it can be seen that outlet pipe (11) has a considerably longer length than outlet pipe (13) it would have been obvious to one of ordinary skill in the art to select a length of approximately twice as long, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or working ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

With respect to claim 3 '446 discloses the invention as claimed except wherein the outlet pipe of the second muffler has an at least slightly larger diameter than the outlet pipe of the first muffler, one of ordinary skill in the art would have provided a

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larger diameter outlet in order to reduce the back pressure associated with the longer length of travel in the second muffler.

3. Claims 4-6 and 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over DE19743446 in view of EP0682172 (hereinafter '172).

With respect to claim 4 '446 discloses the invention as claimed except wherein the first muffler has an interior structure divided into three part spaces by means of two metal separating sheets, with the first metal separating sheet being perforated and the second metal separating sheet being intact.

'172 discloses a muffler (see figure 5) wherein the muffler has an inner structure divided into three part spaces (9,10 and 11 in figure 5) by means of two metal separating sheets (8a and 8b in figure 5) with the first separating sheet being perforated (see figure 4) and the second metal separating sheet being intact (refer to claim 6 discloses wherein at least one of the sheets is perforate, implicitly disclosing wherein one is not).

At the time of the invention it would have been obvious to one of ordinary skill in the art to combine the teachings of '172 to have a muffler so structured with the mufflers of DE '446 to provide an exhaust silencer of improved sound reduction.

With respect to claim 5 '172 further discloses wherein the input pipe opens into the first space at the inlet side (refer to figure 5, openings in inlet pipe are present in the first space 9).

With respect to claim 6 '172 further discloses wherein the outlet pipe (7 in figure 5) leads starting from the first part space (9) on the inlet side through the second part

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space (10) and the third part space (11) with the outlet pipe (7 in figure 5) being able to be acted on by the flow both from the first part space (open to space 9) and from the first part space through the second part space (refer to openings 13).

With respect to claim 8 '172 discloses wherein a muffler has an inner structure divided into three spaces (9-11 in figure 5) by means of two metal separating sheets (8a and 8b) with the first separating sheet being intact and the second metal separating sheet being perforated (as '172 discloses that at least one of the plates is to be perforated it would have been obvious to one of ordinary skill in the art to apply this teaching with either plate 8a, plate 8b or to both plates 8a and 8b).

With respect to claim 9 '172 further discloses wherein the inlet pipe extends through the first space and through the second space at the inlet side and opens into the third space (as seen in figure 5 the pipe 6 opens into space 11 as well as space 10).

4. Claims 7 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over DE 19743446 in view of EP0682172 and further in view of Uegane (US20010018995).

With respect to claim 7 '446 as modified discloses the invention as claimed except further comprising a resonator that extends into the second part space and third part space adjoins the inlet pipe.

Uegane disclose a resonator (elements 34 and 32 in figure 2) which extend into a second and third part space (29 and 30 in figure 2) and adjoin the inlet pipe (14 in figure 2).

With respect to claim 11 Uegane further discloses a resonator (35 in figure 2) which connects the third part space (29) to the first part space(31 in figure 2).

At the time of the invention it would have been obvious to one of ordinary skill in the art to combine the teachings of Uegane to provide a resonator connecting the part spaces of the muffler of '446 as modified to further reduce unwanted noise in a minimum of volume.

5. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over DE 19743446 in view of EP0682172 and further in view of Nilsson et al (US20010045322).

With respect to claim 10 '446 as modified discloses the invention as claimed except wherein the outlet pipe leads through the second part space into the first part space on the inlet side, starting from the third part space and back through the second part space and the third part space in an arcuate curve with the outlet pipe being able to be acted on by flow at the inlet side both from the third part space and from the third part space through the second part space.

Nilsson discloses an outlet pipe of a muffler (7 in figure 1) leads through a second part space into a first part space on the inlet side, starting from a third part space and back through the second part space and the third part space in an arcuate curve with the outlet pipe being able to be acted on by flow at the inlet side both from the third part space and from the third part space through the second part space (refer to figure 1, partitions shown but unnumbered in figure 1).

At the time of the invention it would have been obvious to one of ordinary skill in the art to combine the teachings of Nilsson to route the exhaust outlet pipe through the

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part spaces as claimed with the muffler of '446 as modified to provide a muffler in which "predetermined requirements for comfort directed low-frequency suppression of the exhaust flow noise as well as statutory requirements for high frequency absorption of the noise are fulfilled" (see abstract).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Refer to form 892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to FORREST M. PHILLIPS whose telephone number is (571)272-9020. The examiner can normally be reached on Monday through Friday 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Benson can be reached on 5712722227. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/F. M. P./
Examiner, Art Unit 2837

/Jeffrey Donels/
Primary Examiner, Art Unit 2837